In math class this year, we used a program called Connected Mathematics: 2. This is a very different program from what we have used in the past.

Connected Mathematics: 2 consists of eight math units, including Prime Time, Bits and Pieces: I, Shapes and Designs, Bits and Pieces: II, Covering and Surrounding, Bits and Pieces: III, Data About Us, and How Likely Is It? We have worked on five of the units so far: Prime Time, Bits and Pieces: I, Shapes and Designs, Bits and Pieces: II, Covering and Surrounding, and Bits and Pieces: III.

The beginning of each unit includes three questions that should be thought about throughout the unit. These questions will often be answered as we move along, whether in class work or homework. Here are three questions from the book Bits and Pieces: I.



Picture found from: <http://ricky.verona.k12.wi.us/iWeb/Rohlfing/T3_Rohlfing/rohlfing_math/Bits_and_Pieces_II.html>

Next, the book reviews what you have learned in previous books, and how it relates to the book that you are using. It also explains what you will learn in the current unit. The book then reviews “Mathematical Highlights,” or main points that you will study. It is a good way to see what you will be learning in the book.

Mathematical Highlights: Bits and Pieces: II

**In Bits and Pieces: II, you will develop an understanding of and strategies for the four basic arithmetic operations with fractions.**

**You will learn how to:**

•Use benchmarks and other strategies to

   estimate the reasonableness of results of

   operations with fractions

• Develop ways to model sums, differences,

   products, and quotients with areas, strips, and

   number lines

• Use estimates and exact solutions to make

   decisions

•Look for and generalize patterns in numbers

• Use knowledge of fractions and equivalence of

   fractions to develop algorithms for adding,

   subtracting, multiplying, and dividing fractions

• Recognize when addition, subtraction,

   multiplication, or division is the appropriate

   operation to solve a problem

• Write fact families to show the inverse

   relationship between addition and subtraction,

   and between multiplication and division

• Solve problems using arithmetic operations on

   fractions

**As you work on the problems in this unit, make it a habit to ask questions about situations that involve fraction operations.**

*What models or diagrams might be helpful in understanding the situation and the relationships among quantities?*

*What model or diagrams might help decide which operation is useful in solving a problem?*

*What is a reasonable estimate for the answer?*

The “Investigations” are the central theme in each unit. Each Investigation has a central idea in which we focus on as we work through the problems. Investigations help us understand the central topics that will appear on the tests and homework. Each unit includes three to five investigations, and inside those are two to five problems.

The “Problems” in each Investigation are the small ideas that fall under the topic of each investigation. The teacher introduces each Problem, and then we pair off, or group off, to complete each question or experiment in the Problem.

The Problems in each Investigation are followed by homework. The name of the homework system is called ACE Homework. They include applications that we have just learned, connections to previous units, and extensions of many things that we will learn soon. That is why ACE stands for: Applications, Connections, and Extensions.

We work on problems and concepts while discussing them in class, and record our information in our notebook. We use our notebooks to organize our information in a format that is easy to be read and understood. The notebook involves a class work section, a homework section, an assessment section, and a reference section. We also copy the vocabulary terms in the back of our books into our vocabulary notebook that has followed us from fifth grade.

Here is an example of an ACE question from Bits and Pieces: II on page 26.

29. One number is near the benchmark ¼, and another is near the benchmark 1 ½. Estimate their sum. Explain.

The estimated sum is 1 ¾. The answer is 1 ¾ because 1 ½ + ¼ = 1 ¾. We worked on benchmarks in the previous unit, and adding them was a connection to the last unit, Bits and Pieces: I.

My favorite unit was Bits and Pieces: II. I liked this unit because it was very fun. Adding, subtracting, multiplying, and dividing fractions was always interesting to me. There was always another concept that we could learn, and it kept the book fun to work in. it was sad when we had to take our test, because we couldn’t learn anything more about the functions of fractions.

I learned so many things, for example, I learned how to use benchmarks to add, subtract, multiply, and divide fractions. I had always learned how to add and subtract fractions, but I never knew there was an easy way, like benchmarks. I learned algorithms for the operations with fractions, and I particularly liked dividing with fractions. There were so many interesting steps, such as changing the sign to multiplication and transferring the divisor to its reciprocal. I never knew that you could divide with fractions by multiplying, and once I found out, I thought it was really cool.

I connected the concepts from this unit to my life by

Picture taken from: <http://www.paperbackswap.com/Bits-Pieces-II-Using-Fraction/book/0133661326/>

